

A solder bonded assembly comprising:

a first substrate comprising a first solder pad;
a second substrate comprising a second solder pad;
a substantially non-deformable dielectric core provided with a solderable metal layer and disposed between said first and second solder pads; and
a solder region covering at least a portion of each of (a) said first solder pad, (b) said second solder pad and (c) said solderable metal layer.

Please add new claims 24-29 as shown below.

24. A solder-coated article comprising:

a dielectric core having a largest dimension ranging from 1 to 1000 microns;
a solderable metal layer over said core; and
a solder layer over said metal layer;
wherein said dielectric core has a melting temperature higher than said solder layer.

25. A modified substrate comprising:

a substrate;
a metalized pad on said substrate; and
a bump feature on said metalized pad, said bump feature comprising a dielectric core; a solderable metal layer over said

core; and a solder region contacting at least a portion of said solderable metal layer and at least a portion of said metalized pad;

wherein said dielectric core has a melting temperature higher than said solderable metal layer.

26. A solder bonded assembly comprising:

a first substrate comprising a first solder pad;
a second substrate comprising a second solder pad;
a dielectric core provided with a solderable metal layer and disposed between said first and second solder pads; and
a solder region covering at least a portion of each of
(a) said first solder pad, (b) said second solder pad and (c)
said solderable metal layer;

wherein said dielectric core has a melting temperature higher than said solderable metal layer.

27. The solder-coated article of claim 1, wherein said solderable metal layer has a thickness of 0.1 to 1 micron.

28. The modified substrate of claim 9, wherein said solderable metal layer has a thickness of 0.1 to 1 micron.

29. The solder bonded assembly of claim 16, wherein said solderable metal layer has a thickness of 0.1 to 1 micron.